

PATENT COOPERATION TREATY
PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

CONFIRMATION

Applicant's or agent's file reference 42968PCX329	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/NZ2004/000184	International filing date (day/month/year) 13 August 2004	(Earliest) Priority Date (day/month/year) 15 August 2003
Applicant AGRESEARCH LIMITED et al		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box No. II).

3. ☐ Unity of invention is lacking (See Box No. III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☒ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/NZ2004/000184

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. ⁷: A61 K 31/407; A61P 9/10, 9/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DWPI and MEDLINE: Key words – Lolitrem, Lolitriol, Lolilline, Lolicine, Potassium, ion channel, antagonist, repolarisation, hyperpolarisation and related terms

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 2003/ 105868 A (MERCK & Co. INC) 24 December 2003. See pages 5, 7, 13 and claim 1	1-8, 10, 12-13, 16-34
X	Miles C. et al. Large scale isolation of Lolitrem B and structure determination of Lolitrem E. J. Agric. Food Chem 1994, 42, pages 1488-1492 See abstract and Fig. 1	1-5, 7, 16-29, 33-34
X	Munday-Finch S. et al. Isolation and structure elucidation of Lolitrem A, a tremorgenic mycotoxin from perennial ryegrass infected with Acremonium lolii. J. Agric. Food Chem. 1995, 43, pages 1283-1288 See abstract and Fig. 1	1-6, 16-26, 33-34

☒ Further documents are listed in the continuation of Box C
 ☒ See patent family annex

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
22 October 2004

Date of mailing of the international search report

18 NOV 2004

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/NZ2004/000184

C (Continuation).

DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Munday-Finch S. et al. Isolation of Lolicine A, Lolicine B, Lolitriol, and Lolitrem N from <i>Lolium perenne</i> infected with <i>Neotyphodium lolii</i> and evidence for the natural occurrence of 31-Epilolitrems N and 31-Epilolitrems F. J. Agric. Food Chem. 1998, 46, pages 590-598 See abstract and Fig. 1	1-7, 12-13, 16-34
X	Munday-Finch S. et al. Isolation and structure elucidation of Lolilline, a possible biosynthetic precursor of the Lolitrems family of tremorgenic mycotoxins. J. Agric. Food Chem. 1997, 45, pages 199-204 See Figures 1 and 3	1-7, 10, 16-29, 33-34
X	Derwent Abstract Accession No. 92-308267/38, Class B02, C02, D16, AU 9210402 A (NEW ZEALAND SEC FORESTRY) 30 July 1992. See abstract	1-3, 7, 16-24
X	Munday-Finch S. et al. Structure elucidation of Lolitrems F, a naturally occurring stereoisomer of the tremorgenic mycotoxin Lolitrems B, isolated from <i>Lolium perenne</i> infected with <i>Acremonium lolii</i> . J. Agric. Food Chem. 1996, 44, pages 2782-2788. See abstract, Figures 1 and 4	1-4, 16-32, 34

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/NZ2004/000184

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report	Patent Family Member
WO 2003/105868	NONE

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

END OF ANNEX